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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/554,119

10/18/2006

Ole-Bendt Rasmussen

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EXAMINER

LOPEZ, RICARDO E.

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

01/05/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/554,119	Applicant(s) RASMUSSEN, OLE-BENDT	
	Examiner RICARDO E. LOPEZ	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-97 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 49-66, 96 and 97 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☒ Claim(s) 1-97 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 21 October 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/11/2009</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Election/Restrictions

1. Restriction is required under 35 U.S.C. 121 and 372.

This application contains the following inventions or groups of inventions which are not so linked as to form a single general inventive concept under PCT Rule 13.1.

In accordance with 37 CFR 1.499, applicant is required, in reply to this action, to elect a single invention to which the claims must be restricted.

Group 1, claims 49 – 66 and 96 – 97, drawn to an extruded oriented film comprising a layer of alloy of at least two polymers.

Group 2, claims 1 – 49, drawn to a method of manufacturing said extruded oriented film.

Group 3, claims 67 – 95, drawn to an apparatus for extruding a thermoplastic material.

2. The inventions listed as Groups 1, 2 and 3 do not relate to a single general inventive concept under PCT Rule 13.1 because, under PCT Rule 13.2, they lack the same or corresponding special technical features for the following reasons: unity of invention is present *a priori* since there are common technical features to the three Groups of inventions, such as the phase separation characteristic of the extruded oriented film. However, the coextrusion of oriented films comprising two polymers with a phase separation characteristic is taught by Momose US Patent No 5,019,439 (Abstract). Thus, the corresponding technical features is not the inventors own contribution to the art. Therefore, there is no special corresponding technical feature or unity of invention between the claimed Groups. Restriction is appropriate.

3 Applicant is advised that the reply to this requirement to be completed must include(i) an election to be examined even though the requirement may be traversed (37 CFR 1.143) and (ii) identification of the claims encompassing the elected invention.

4. The election of an invention may be made with or without traverse. To reserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the restriction requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected invention.

5. If claims are added after the election, applicant must indicate which of these claims are readable upon the elected invention.

6. Should applicant traverse on the ground that the inventions are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the inventions to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the inventions unpatentable over the prior art, the evidence of admission may be used in a rejection under 35 U.S.C. 103(a) of the other invention.

7. The examiner has required restriction between product and process claims. Where applicant elects claims directed to the product, and the product claims are subsequently found allowable, withdrawn process claims that depend from or otherwise require all the limitations of the allowable product claim will be considered for rejoinder. All claims directed to a nonelected

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process invention must require all the limitations of an allowable product claim for that process invention to be rejoined.

8. During a telephone conversation with Robert Strozier on November 05, 2009 a provisional election was made with traverse to prosecute the invention of Group I, claims 49-66 and 96-97. Affirmation of this election must be made by applicant in replying to this Office action. Claim 1-48 and 67 to 95 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

9. In the event of rejoinder, the requirement for restriction between the product claims and the rejoined process claims will be withdrawn, and the rejoined process claims will be fully examined for patentability in accordance with 37 CFR 1.104. Thus, to be allowable, the rejoined claims must meet all criteria for patentability including the requirements of 35 U.S.C. 101, 102, 103 and 112. Until all claims to the elected product are found allowable, an otherwise proper restriction requirement between product claims and process claims may be maintained. Withdrawn process claims that are not commensurate in scope with an allowable product claim will not be rejoined. See MPEP § 821.04(b). Additionally, in order to retain the right to rejoinder in accordance with the above policy, applicant is advised that the process claims should be amended during prosecution to require the limitations of the product claims. Failure to do so may result in a loss of the right to rejoinder. Further, note that the prohibition against double patenting rejections of 35 U.S.C. 121 does not apply where the restriction requirement is withdrawn by the examiner before the patent issues. See MPEP § 804.01.

Claim Rejections - 35 USC § 112

10. Claims 49 – 55 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear the meaning of the limitation for the P1 fibrils to exhibit “locations of rupture” in independent claim 49. For examination purposes it is interpreted to mean “points of discontinuation”.

Claim Rejections - 35 USC § 102

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 56 – 60 are rejected under 35 U.S.C. 102 (b) as being unpatentable over Momose US Patent No 5,019,439.

12. Considering claims 56 – 60, Momose teaches an extruded oriented film comprising a layer of alloy of two polymers, the second resin corresponding to applicants P1 and the first resin corresponding to applicants P2. The first resin may be, for example, a polyolefin such as polyethylene or polypropylene, polystyrene, a polyacrylonitrile, polyester, a polycarbonate, poly vinyl chloride, or a modified resin thereof. The second resin may be, for example, a polyamide, a saponified ethylene vinyl acetate copolymer, an ethylene vinyl alcohol copolymer EVOH (Col. 3, lines 42 -48); both resins are partially crystalline under 100 °C (i.e. nylon 6 P1 and polyethylene P2, as described in example 2); wherein P2 in its unoriented state at 20 ° C exhibits a coefficient or modulus of elasticity more than 15 % lower than P1, and the alloy comprises a dispersion of microscopically fine fibrils (tapes) of P1 surrounded by P2.

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These fibrils or tapes extend each mainly in one direction and has width and thickness lower than 5 μm ; said fibrils are flat and substantially parallel with the plane of the film, with thickness preferably in the range 0.05 to 10 μm and width more than five times the thickness (Col. 3, lines 1-21). Furthermore, that as result of the above described construction; the thermoplastic resin film can exhibit significantly improvement gas barrier property as compared with a known film having dispersed therein fine particles of the second thermoplastic resin (Col. 3, lines 23 – 28). Moreover, Momose teaches in the embodiment illustrated in Fig. 1 that the fibrils or tapes of resin P1 show at least 4 die lines. Thus anticipating all limitations in the subject claims.

Claim Rejections - 35 USC § 103

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 49 – 55 and 96 – 97 are rejected under 35 U.S.C. 103(a) as being unpatentable over Momose US Patent No 5,019,439 in view of Gash US Patent No 4,243,463.

15. Considering claims 49 – 55 and 96 - 97, Momose teaches an extruded oriented film comprising a layer of alloy of two polymers, the second resin corresponding to applicants P1 and the first resin corresponding to applicants P2. The first resin may be, for example, a polyolefin such as polyethylene or polypropylene, polystyrene, a

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polyacrylonitrile, polyester, a polycarbonate, poly vinyl chloride, or a modified resin thereof. The second resin may be, for example, a polyamide, a saponified ethylene vinyl acetate copolymer, an ethylene vinyl alcohol copolymer EVOH (Col. 3, lines 42 -48); both resins are partially crystalline under 100 °C (i.e. nylon 6 P1 and polyethylene P2, as described in example 2); wherein P2 in its unoriented state at 20 ° C exhibits a coefficient or modulus of elasticity more than 15 % lower than P1, and the alloy comprises a dispersion of microscopically fine fibrils (tapes) of P1 surrounded by P2. These fibrils or tapes extend each mainly in one direction and has width and thickness lower than 5 µm; said fibrils are flat and substantially parallel with the plane of the film, with thickness preferably in the range 0.05 to 10 µm and width more than five times the thickness (Col. 3, lines 1-21).

The limitation for the P1 fibrils to exhibit “locations of rupture”, as discussed above in the 112 rejection it is interpreted to mean points of discontinuation. Momose teaches in the embodiment illustrated in Fig. 1 that fibrils or tapes of polymer P1 are discontinuous, thus meeting the limitation in the subject claims.

Momose does not specifically recognize that the composite be a cross lamination of the polymeric films.

Gash teaches that cross laminates of monoaxially oriented, thermoplastic polymeric films have a number of advantageous properties; in particular they have much better tear resistance than a single play film of the same overall thickness and of the same polymer which has been biaxially oriented (Col. 1, lines 24 – 29).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to cross laminate the extruded oriented films of Momose when it is desired to provide films with improved tear resistance.

16. Claims 60 – 66 are rejected under 35 U. S. C. 103(a) as being unpatentable over Momose US Patent No 5,019,439 in view of Desarzens et al. US Patent No 6, 326,411 B1.

17. Considering claims 60 – 66, Momose teaches an extruded oriented film comprising a layer of alloy of two polymers, the second resin corresponding to applicants P1 and the first resin corresponding to applicants P2. The first resin may be, for example, a polyolefin such as polyethylene or polypropylene, polystyrene, a polyacrylonitrile, polyester, a polycarbonate, poly vinyl chloride, or a modified resin thereof. The second resin may be, for example, a polyamide, a saponified ethylene vinyl acetate copolymer, an ethylene vinyl alcohol copolymer EVOH (Col. 3, lines 42 -48); both resins are partially crystalline under 100 °C (i.e. nylon 6 P1 and polyethylene P2, as described in example 2); wherein P2 in its unoriented state at 20 ° C exhibits a coefficient or modulus of elasticity more than 15 % lower than P1, and the alloy comprises a dispersion of microscopically fine fibrils (tapes) of P1 surrounded by P2. These fibrils or tapes extend each mainly in one direction and has width and thickness lower than 5 µm; said fibrils are flat and substantially parallel with the plane of the film, with thickness preferably in the range 0.05 to 10 µm and width more than five times the thickness (Col. 3, lines 1-21).

Momose does not specifically recognize that the extruded oriented film be a cellular expanded film.

Desarzens et al. teaches an extrusion composition comprising a polymer, an adsorption agent including an expansion agent and a nucleating agent (Abstract). Furthermore, Desarzens et al. also teaches that by means of polymer extrusion technology, cellular structure materials of very variable apparent densities can be produced (Col. 1, lines 16 – 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to incorporate expanding agents to Momose's polymeric composition when it is desired to obtain films having apparent density lower than the density of the unexpanded films. The weight proportion of P1 to P2 would be a result effective variable related to the final application of the thermoplastic polymeric cellular expanded film.

Conclusion

18. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RICARDO E. LOPEZ whose telephone number is (571)-270-1150. The examiner can normally be reached on Monday to Thursday 8:00 am-5:30pm EST, and every other Friday from 8:00 am to 4:30 pm..

19. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, D. Lawrence Tarazano can be reached on (571)-272-1515. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

20. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/REL/
Ricardo E. Lopez
Patent Examiner, Art Unit 1794
January 03, 2010

/D. Lawrence Tarazano/
Supervisory Patent Examiner, Art
Unit 1794

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